

# THE FOURTH INDUSTRIAL REVOLUTION: PROSPECTS AND CHALLENGES FOR AFRICA

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# Introduction

- Previous industrial revolutions saw Africa as:
  - Supplier of low cost labour
  - Exporter of minerals and precious metals
  - Importer and consumer goods and services
- African states remain technology colonies
- Unemployment rises as technological and knowledge intensive activities are largely outsourced



# Problem Statement

- Africa has the youngest population
- It could spur an accelerated economic growth known as a demographic dividend
- 4IR might render the continent's workforce obsolete and reinforce already existing inequalities
  
- The study offers a high level 4IR readiness scan of Africa
- Contributes to policy debates and pathways





# Research Approach



# Fourth Industrial Revolution

- Dynamic convergence of technology domains
- Rapid distribution of products and services over the internet
- Provided the digital divide is solved, there is potential to reach all corners of society



# Key trends

- Bottom up approaches, as observed in India
- Clarity on the role of 4IR within each nation state, as observed in Germany, Japan, USA and China
- A roadmap approach, as observed with Thailand 1.0 and now Thailand 4.0
- Higher education too slow to augment 4IR skills, including South Africa
- Adapt and redesign technologies for local challenges, as observed in Nigeria
- Suitable business models to deliver technologies to market
- Top 3 African economies ranked in the middle and lower tier of the 2016 top 40 global manufacturing index



# Prospects and Challenges

Prospects	Challenges
New markets and industries	No 4IR infrastructure
Upgrade of existing industries	Deindustrialization ( <i>premature</i> )
Future jobs	Scarcity of jobs
Efficient service delivery	Low skilled workforce
	Bias and discrimination



# Concluding Remarks

- Embrace 4IR in new and simple settings – low cost and launch infrastructure development
- Invest in bridging the digital divide – to harness localised and enhance informal economic activities
- Balance future and current employment needs
- An adaptive approach to policy – learning by doing in search suitable policy mix
- Identify and select certain African states to lead on elements of 4IR – and later accelerate knowledge and technology transfer, starting within each region





# Thank You

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